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**From:** Wirick, Holiday [wirick.holiday@epa.gov]  
**Sent:** 10/6/2020 11:54:12 PM  
**To:** Anderson, Danielle [Anderson.Danielle@epa.gov]; Sengco, Mario [Sengco.Mario@epa.gov]  
**Subject:** Follow-up to my questions re: ND hardness-dependent criteria  
**Attachments:** ND WQS ACUTE\_CHRONIC.xls; 304a metals calculator.xlsx; ND WQS 2020\_Complete\_Rule\_Ammendments\_Strikeout\_Color\_NEW.docx

Wirick, Holiday has shared a OneDrive for Business file with you. To view it, click the link below.



ND WQS HardnessWorking Files.xlsx



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Hi Danielle and Mario, thanks again for your help on this issue. I really appreciate it.

Just as an FYI, I attached the following four files for your reference.

- **ND WQS Hardness Working Files** contains ND's lentic and lotic system data. Lentic data collected between 1991 and 2020 at 0-6' (7,141 samples). Maximum concentrations of 3,550 mg/l, Average concentration of 442 mg/l, Median concentration of 405 mg/l. Lotic systems data collected between 1993 and 2020 at all depths (13,597 samples). Maximum concentrations of 14,500 mg/l, Average concentration of 632 mg/l, Median concentration of 428 mg/l.
- **ND WQS Acute\_Chronic** contains ND's hardness criteria calculations.
- **304a metals calculator** is the spreadsheet Mario and Erica sent me.
- **ND WQS 2020 \_complete\_rule\_Amendments\_Strikeout\_Color\_NEW** is ND DEQ's proposed WQS revisions that are out for public comment. The table with hardness dependent criteria revisions is on page 15.

Thank you. Have a wonderful evening!

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